Dinky devices

As the popularity of USB flash drives continues to grow, manufacturers are coming up with all sorts of ingenious ideas to appeal to potential buyers. We take a look at some of the options

USB flash drives must be the smallest and most convenient storage devices available these days. They're extremely simple things, consisting of just a small memory chip that can be wrapped in a case only slightly larger than a pack of chewing gum. That makes them an ideal way of backing up important files or transferring files between computers.

Despite their simplicity, though, the drives we've seen have had quite a few weird and wonderful features designed to appeal to many different types of people. Read on to find out more.

Plug and play

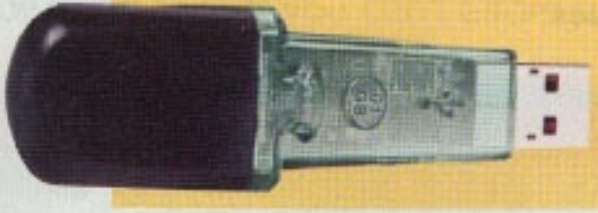
Whatever clever ideas manufacturers come up with, these **USB** flash drives are primarily intended as storage devices, so you should first consider the amount of storage each one offers, its price and performance.

Flash drives are available in many different sizes – or to be more accurate, with many different storage capacities – ranging from 32**Mb** up to a vast 1**Gb**. The most common size, however, is 128Mb, so that's what we've concentrated on in order to compare like with like wherever possible.

USB who?

The standard version of USB that most of us have on our PCs is technically known as USB 1.1 and has a theoretical maximum transfer speed of 1.5Mb/sec. The new USB 2 standard is potentially 10 times faster but as our speed tests show, practical performance levels tend to be quite a bit lower.

Confusingly, there's also an intermediate type of USB, known as USB 2 Full Speed, which is merely a slightly faster version of USB 1.1. The Disgo drive we tested says USB 2 on the box, but it's actually the 'Full Speed' version, which is technically accurate but the claimed speed of 14Mb/sec is still a good deal slower than USB 2 proper.



There are different standards of USB, with varying performance levels

USB FLASH DRIVES COMPARED

PRODUCT	USB FLASH DRIVE	POCKET FLASH DRIVE
Manufacturer	Belkin	Corega
Telephone	0800 223 55460	0118 920 9800
Website	www.belkin.co.uk	www.corega-international.com
Price	£70	£42
Capacity	128Mb	128Mb
Interface	USB 1	USB 1
Other sizes available	Up to 512Mb	32Mb, 64Mb
Good points	Password protection	Write-protection switch
Bad points	Expensive	Slightly below-average performance
RATINGS		
Overall	★★★☆☆	★★★☆☆

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Performance isn't too much of an issue, as all these drives use a standard USB port to connect to your PC or Mac. There are, of course, different versions of USB available (see USB who?, previous page), so there's a clear split between the drives which have a USB 1 (referred to simply as 'USB') interface and those with the faster **USB 2**.

The drives with USB 1 all offer read and write speeds of around 0.7Mb/sec ('read' speed is the speed for copying data from a drive, while 'write' speed is for copying files onto it). Corega's Pocket Flash Drive is a bit below that average, while the Disgo drive is a bit faster, but the differences aren't enormous. The drives with USB 2 interfaces are much faster, though, so if your PC or Mac has USB 2, it's worth paying that little bit extra to get better performance.

USB drives also have the advantage of being really easy to use. All recent versions of Microsoft Windows and Mac OS have USB software built-in, so you can use these flash drives without having to install any **drivers**. You just plug the drive straight into your Mac or PC and you can save files onto it, just as you would do with an ordinary floppy disk. The only exceptions are older PCs that have Windows 98 on them. You need extra software to use any USB device with Windows 98, but this is generally included with each flash drive. Some companies, such as Crucial and SmartDisk, ask you to download this software from their websites.

▲ The Pocket Flash Drive from Corega has a write-protection switch

Added extras

Some manufacturers do throw in extra software with bonus features. A common extra is the inclusion of some sort of password protection, which will prevent anyone else from opening your files if you lose the drive or leave it lying around. The prize for best software goes to the Disgo drive for the MyKey application that pops up on-screen whenever you plug the drive into your computer. An on-screen display tells you how much room is left on the drive and there's a button that will instantly open a window so you can view its contents.

The added extras don't stop there, either. Some manufacturers even modify the basic hardware design to add

▼ The Gizmo is a basic USB Flash drive at a very competitive price

GIZMO	DISGO	USB CARD	MEGA MEMORY WATCH	POWERPLAY PRO	MICRO VAULT	E-ZI DRIVE
Crucial Technology 0800 013 0330	Disgo CMS Peripherals 020 8962 2406	Freecom Computer Connection 01423 704700	Memix 020 8371 9875	SmartDisk 01252 530960	Sony 01932 816000	Waitec MP3 Plus 01225 762137
www.crucial.com/uk	www.mydisgo.com	www.freecom.com	www.memixdirect.com	www.smartdisk.co.uk	www.sonyisstorage.com	www.waitec.com
£38	£60	£90	£70	£59	£69	£38
128Mb	128Mb	128Mb	128Mb	32Mb	128Mb	128Mb
USB 1	USB 2 Full Speed	USB 2	USB 1	USB 1	USB 2	USB 1
Up to 256Mb	Up to 1Gb	Up to 512Mb	256Mb/USB 2	N/A	Up to 256Mb	Up to 1Gb
Low cost	Password protection, utility software	Leather case, password protection, compression and mail utilities	It's a watch!	Wireless laser pointer and remote control unit	Docking station, password and compression utilities	Low cost, password and compression utilities
No bonus features	Not real-time USB 2	Expensive	Cheap plastic strap	Limited storage	A bit slow for USB 2	Poor documentation
★★★☆☆	★★★☆☆	★★★★☆	★★★★☆	★★★☆☆	★★★☆☆	★★★☆☆

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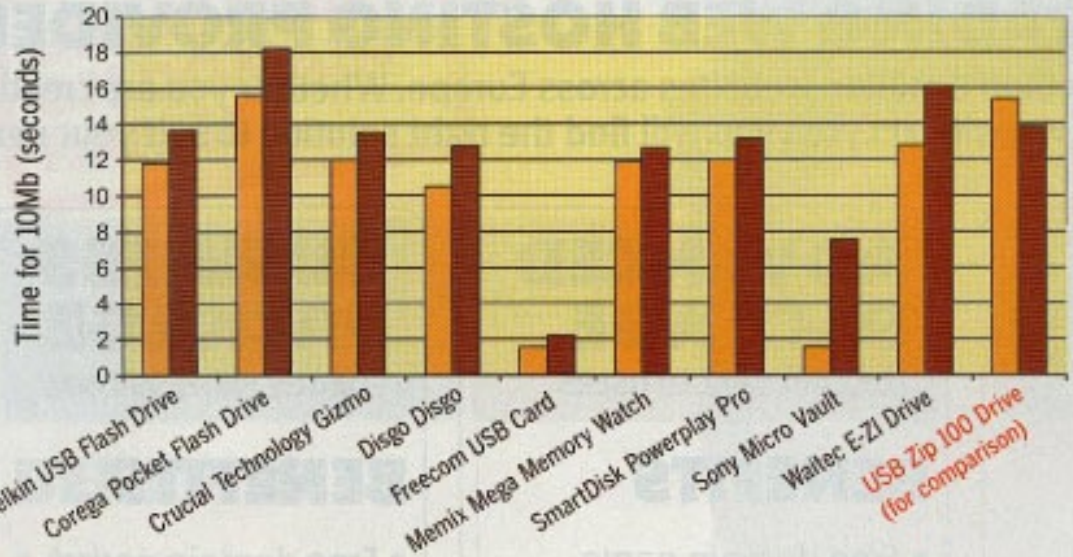
USB flash drive performance



Durable drives

Flash memory drives are very robust and reliable. They don't have lots of moving parts like a Zip disk or hard disk so there's not much that can go wrong with them.

They don't last forever, though. Manufacturers seldom put a specific figure on these things but estimates put the lifespan of a flash drive in the region of 1,000,000 'erase cycles', which means you can erase your files and replace them with new files up to one million times. It's a fairly safe bet that bigger, better and cheaper drives will be available long before you reach that point, though.

▲Freecom's USB card has a wide range of features and caters for both USB 1 and USB 2

entirely new features. Freecom has abandoned the standard stick-like design of USB drives to come up with a really neat credit-card sized storage device. We also liked the little docking cradle that comes with Sony's Micro Vault drive.

SmartDisk has designed its PowerPlay Pro to appeal to business users by throwing in a wireless unit that acts as both a laser pointer and a control device for presentations. The idea is that you can put your files on the drive and then just plug it into a PC in any office you travel to and give instant presentations. It's a good idea, but the drive's 32Mb capacity is a serious limitation.

◀The Mega Watch is a unique combination of watch and USB drive

The most extravagant design must be the Mega Watch from Memix, which is a wristwatch with 128Mb of built-in storage and a USB cable sneakily tucked into the strap.

These added extras do push the price up, though, so you need to decide whether you want a plain and simple storage device or a more sophisticated model that provides additional features.

Flash card

If you want a specific feature, then obviously you'll opt for the drive that offers it. Price-conscious users can go for the low-cost drives from Waitec, Crucial and Corega. However, the USB Card from Freecom is definitely the most attractive flash drive we've seen. It's a bit pricier, but its slimline design is both attractive and practical and a nice case and some extra software features are included. Best of all, it provides USB 2 performance for newer PCs and Macs, while also being compatible with existing computers that only have USB 1.

Cliff Joseph

JARGON BUSTER

Drivers Software needed to allow Windows (and other operating systems) to communicate with a peripheral.

Gb A measurement of storage capacity, usually for hard disks. 1Gb is equal to 1,024Mb (megabytes).

Mb A measurement of storage capacity, usually for computer memory.

USB 2 Faster but backwardly-compatible successor to **USB** that's used by such things as MP3 players and external disk drives.

See www.computeractive.co.uk for a full list of Jargon Buster terms